Pollution Solutions: Stormwater Success Stories

Ben Alexandro
Maryland League of Conservation Voters
Choose Clean Water Coalition

MACo Conference 2018

Using power of
successful projects
to reach new heights

Great projects around Maryland

clean

H2OWARD

Howard County Stormwater Solutions

Rain Garden in a neighborhood setting

Stormwater is the fastest growing source of pollution to our local streams and the Chesapeake Bay. This rain garden, built by county youth in the READY program, acts like a native forest by collecting, absorbing and filtering the stormwater coming off roofs, driveways, sidewalks and patios. Compared to a conventional lawn, rain gardens reduce runoff by allowing 30% more water to soak into the ground. The garden also protects our waterways by removing almost 90% of the nutrients and chemicals, and 80% of the sediment carried in stormwater runoff.

Alliance for the Chesapeake Bay

READY

PATH

LIVE GREEN Howard County

The Office of Environmental Sustainability

PARKS & PEOPLE FOUNDATION

UNIVERSITY OF MARYLAND EXTENSION

Solutions in your community

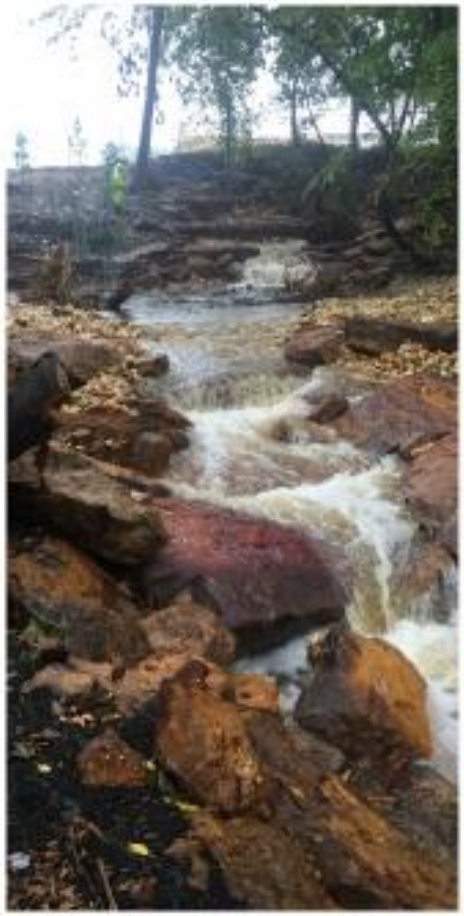
How do we

- Use BMPs to **solve** diverse problems?
- **Learn** from others' successes?
- Know how they are **funded**?

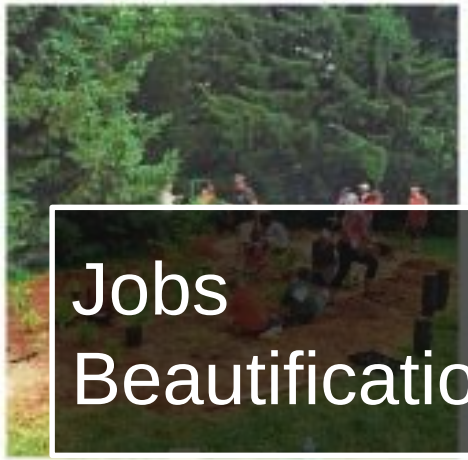
- Educate target audiences?
- Use right messages?
- Help officials, constituents, etc. understand **why funding BMPs are important?**

People see & understand projects?
Love stormwater programs?

Who is your target audience?
What do they care about?



Benefits:



Jobs
Beautification

Community building
Flooding

Interactive toolkit:

connect practitioners- share knowledge

Educate communities

Input from stakeholders

- MACo
- educators
- counties
- nonprofits

Learning from the Great Lakes

- Easy digest
- One page- with $$$
- Searchable map
- Visual database
- Quick, bullet information
- Links to more

most

Municipal Online Stormwater Training Center

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POLLUTION SOLUTIONS: Case Stories from the Chesapeake

The Chesapeake Bay's clean-up is about more than the science of pollution – it is a story of community. People across the watershed are coming together to change the landscape and make a difference. With threats to fragile habitats, public health, and the Bay's multi-billion dollar fishery and seafood industry, this iconic restoration effort remains a regional and national priority. The Maryland League of Conservation Voters Education Fund, through its "Pollution Solutions" initiative, showcases how clean water funds are being used to keep our waterways healthy, beautiful, and economically viable. The map below highlights some of the region's best projects, showcasing how communities and local governments can work together to solve big problems like polluted runoff.

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Maryland League of Conservation Voters Education Fund

Directions: Use the search bar or click on the blue filters below to narrow your search. Then visit a project page to explore and share one-pagers, videos, and more!

Submit a Case Story

Search

Project Type | Story Focus | Scale | Problem Addressed | Stormwater Utility Funds | Year Installed

mostcenter.org/casestories

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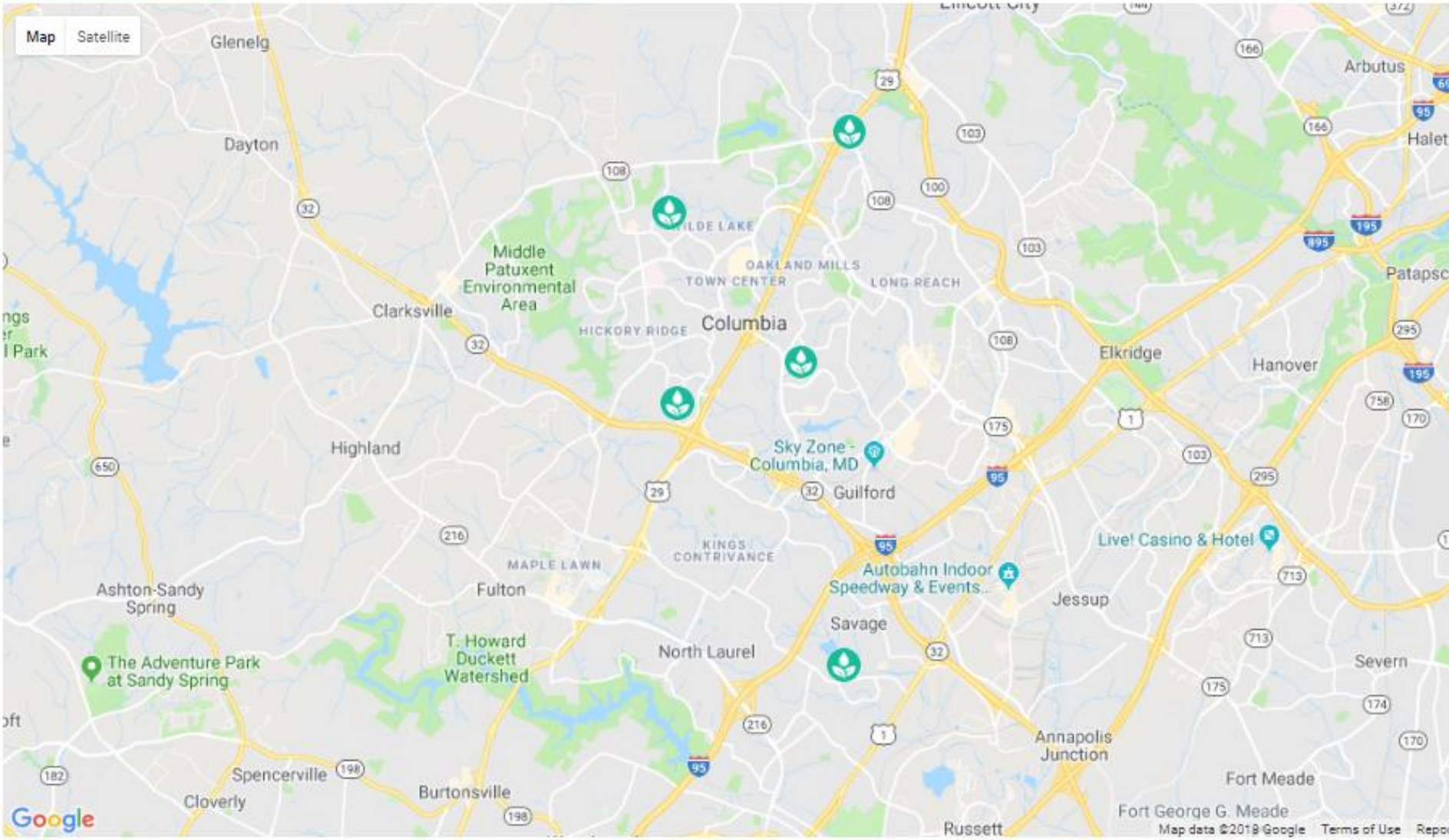
Search

Search | Howard

Project Type	Story Focus	Scale	Problem Addressed	Stormwater Utility Funds	Year Installed

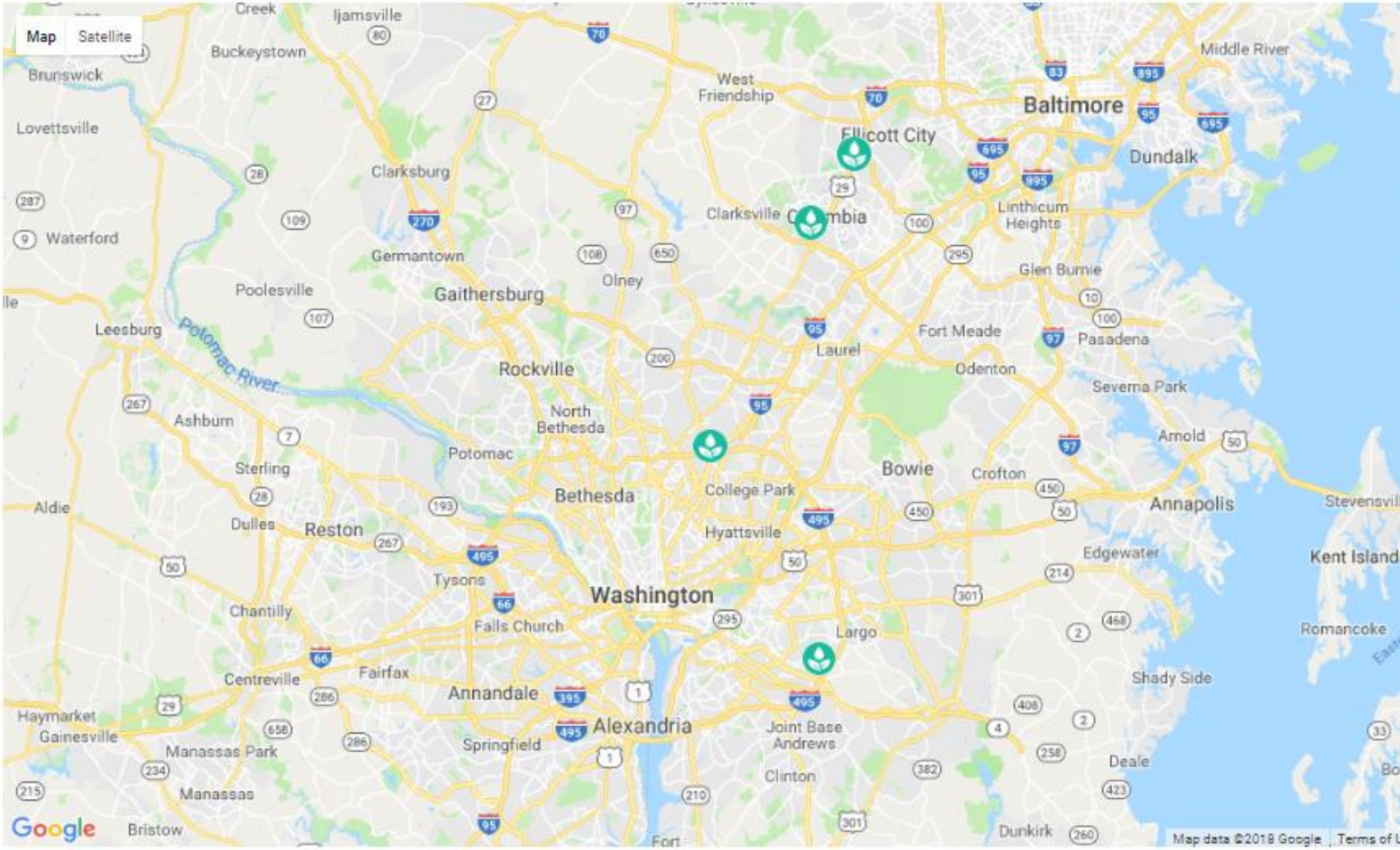
Submit a Case Story



Search church

Project Type | Story Focus | Scale | Problem Addressed | Stormwater Utility Funds | Year Ins

Submit a Case Story



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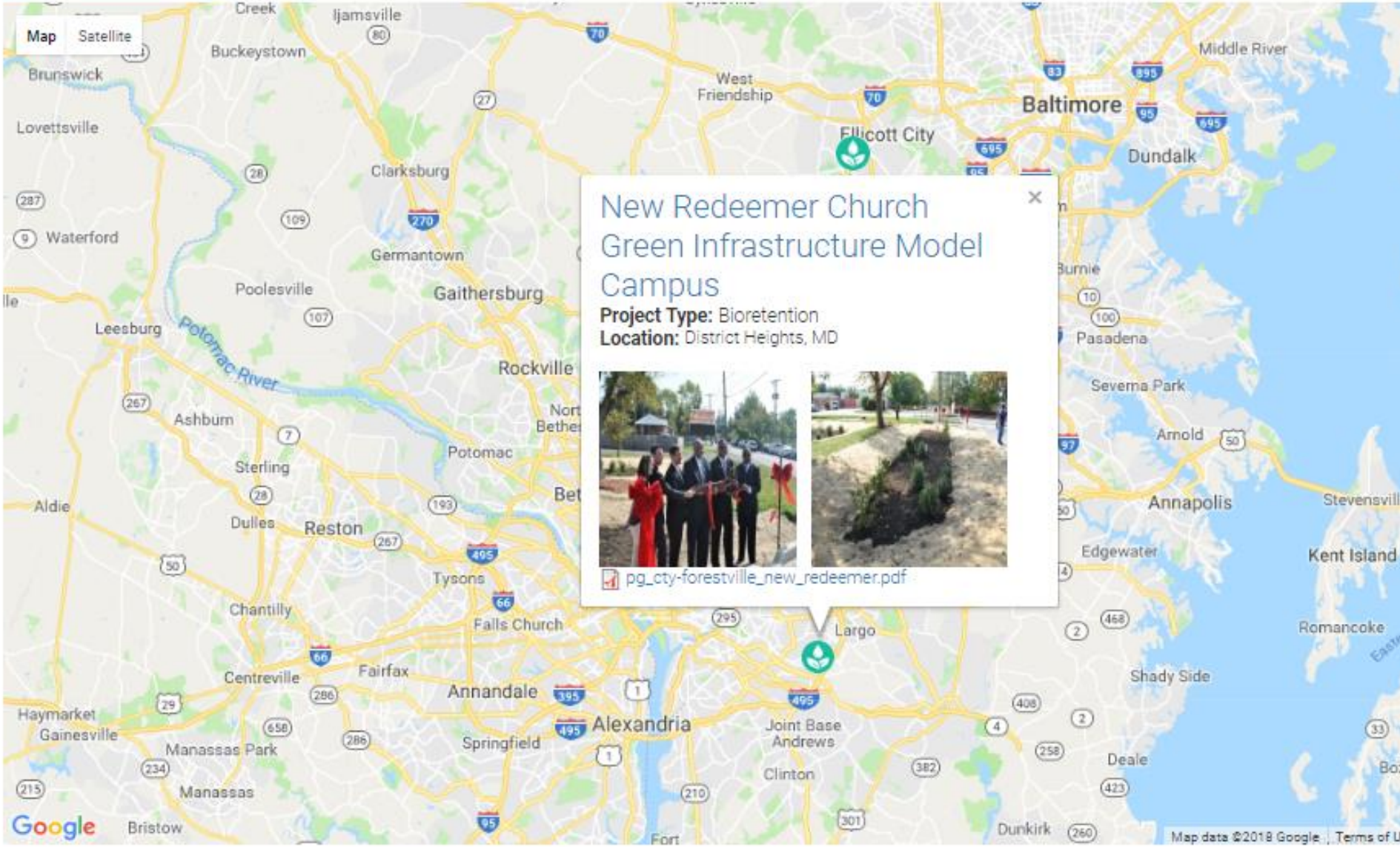

New Redeemer Church Green Infrastructure Model Campus

Project Type: Bioretention
Location: District Heights, MD

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NEW REDEEMER CHURCH GREEN INFRASTRUCTURE MODEL CAMPUS

ChooseCleanWater COALITION

Download one-pager:
pg_cty-forestville_new_redeemer.pdf (1.25 MB)

What is polluted runoff?

Parts of the Chesapeake Bay watershed contain a high percentage of impervious cover – paved or other hard surfaces such as roofs and roadways that prevent rain water from being absorbed into the ground. Instead, water runs along these surfaces, collecting trash and substances such as motor oil, lawn fertilizers, and pesticides. This polluted stormwater flows into streams and rivers, where it threatens aquatic ecosystems and public health.

Effective stormwater management, on the other hand, creates safe paths for polluted runoff to be captured and filtered through the ground before it reaches waterways. This helps keep the environment clean and our communities healthy!

A ribbon cutting at the completion ceremony. Photo credit: Interfaith Partners of the Chesapeake.

A rain garden that will clean thousands of gallons of polluted runoff. Photo credit: Interfaith Partners of the Chesapeake.

Project location: Forestville, MD

Problem: The New Redeemer Church in Forestville was prone to flooding and erosion due to poorly-managed stormwater.

Solution: New Redeemer Church was selected to be a model demonstration site as part of the Prince George's County Clean Water Partnership, an ambitious public-private partnership that will invest $100 million over 10 years to retrofit more than 2,000 acres of impervious surfaces with green infrastructure throughout the county. Water control features installed at New Redeemer include pervious parking pavers, cisterns to hold rainwater and release it slowly over time, and infiltration trenches and rain gardens to slow and filter polluted runoff.

Interfaith Partners for the CHESAPEAKE

CLEAN WATER PARTNERSHIP

Prince George's

Key project facts

Project Type: Bioretention

Scale: $100,000 - $249,999

Story Focus: Environmental Justice, Job Creation, Community Engagement, Business Partnerships

Stormwater Utility Funds: Yes

Problem Addressed: Erosion, Flooding / Drainage, Runoff Pollution

Year Installed: 2015

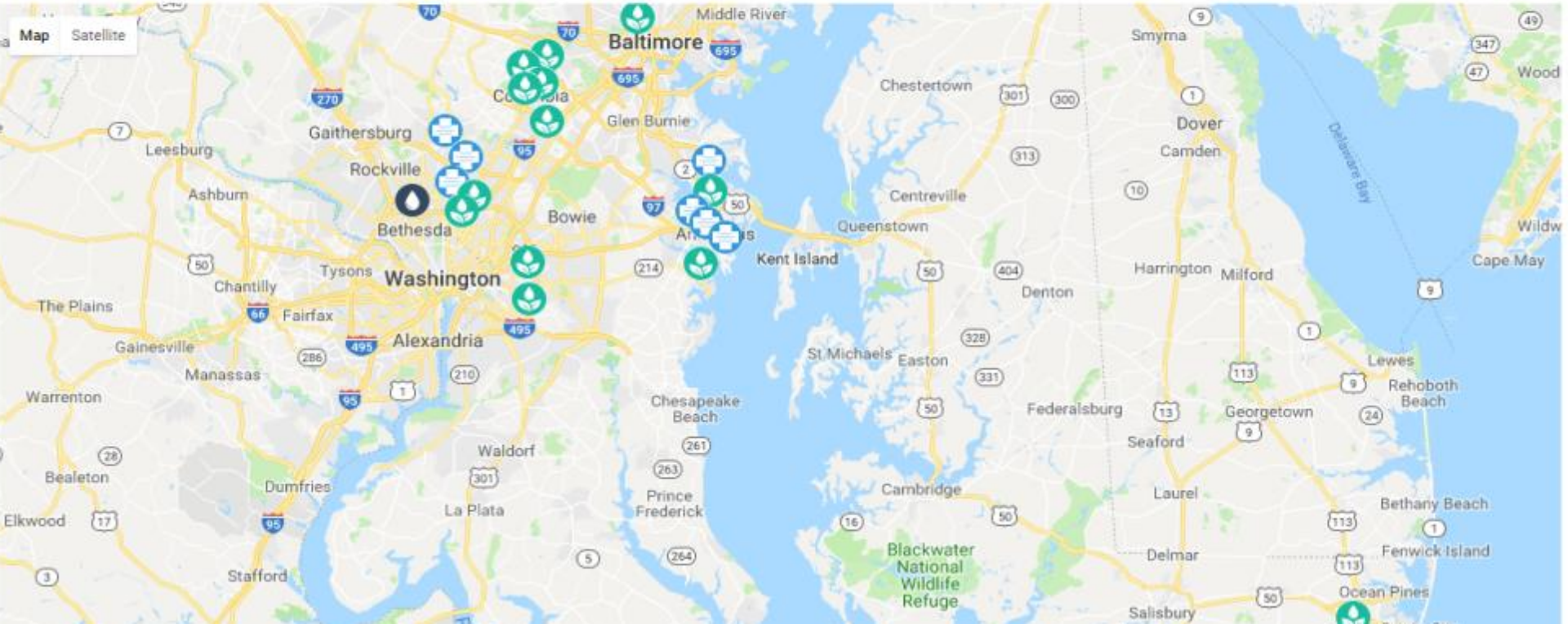
State Legislative District: 25

Congressional District: 4

Project Type	Story Focus	Scale	Problem Addressed	Stormwater Utility Funds	Year Installed
☐ Bioretention	☐ Cost Efficiency	☐ < $10,000	☐ Aesthetics	☑ Yes	☐ Before 2013
☐ Detention Tank	☐ Environmental Justice	☐ $10,000 - $99,000	☐ Erosion	☐ No	☐ 2013
☐ Riparian Buffer	☐ Job Creation	☐ $100,000 - $249,999	☐ Failing Infrastructure		☐ 2014
☐ Stream Restoration	☐ Environmental Benefits	☐ $250,000 - $499,999	☐ Flooding / Drainage		☐ 2015
☐ Tree Planting	☐ Monitoring	☐ $500,000 - $749,999	☐ Health Hazard		☐ 2016
☐ Wetland	☐ Community Engagement	☐ $750,000 - $999,999	☐ Runoff Pollution		☐ 2017
☐ Other	☐ Business Partnerships	☐ > $1,000,000	☐ Other		
	☐ Environmental Education				
	☐ Other				

Reset

Submit a Case Story



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Pollution Solutions (Stormwater Success Stories)

Thank you for your assistance in spreading the word of how stormwater projects are helping our region reach its clean water goals! Your project is an important example for our communities and lawmakers, and we thank you for sharing the details with us!

The data will be transcribed into concise, engaging marketing pieces about successful polluted runoff projects installed in Chesapeake Bay area communities. Ideal projects might have some of the following elements:

- Accompanied by visually-compelling photographs
- Tell some sort of compelling story
- Funded by polluted runoff fees and/or innovative public-private partnerships
- Located in communities of color and/or or underserved communities
- Demonstrating clear benefit to people, communities, and/or natural resources

Photos, Logos, Captions & Credits

Please include a few good quality/high-resolution photos of the project, and provide photo credit information below. Also include your logo if you wish to have it added to the marketing materials that will be generated.

Here are some examples of target photographs wanted:

- Before pictures - Particularly ones that show problems such as flooding or erosion.
- After pictures - Particularly ones that show a big contrast to the before pictures that look beautiful and may include smiling faces.
- A human element - smiling faces, community involvement, kids, etc.
- Pictures after the project are established (for projects completed in previous years.)

Please provide credits and captions here, labeled Photo #1, Photo #2, Report ...etc.

Photos

Upload a File

Logos

Upload a File

ChooseCleanWater COALITION

Polluted Runoff: Solutions

Anne Arundel County

Severn River Association

Winchester on the Severn Community Raingarden

mostcenter.org/casestories

Problem:

Winchester on the Severn is a residential neighborhood north of Annapolis. In one section of the community, an old stormwater conveyance system was failing, with water flows scouring the nearby hillside and polluted runoff impairing Chase Creek, a tributary of the Severn River.

Solution:

Members of the community came together to seek a solution. The result was the installation of a rain garden consisting of native plantings. The garden has mitigated stormwater flows, reduced erosion, attracted butterflies, and improved the aesthetics of the area. Aware of the garden's water quality benefits, community members are committed to conducting ongoing maintenance.

BEFORE: the rain garden, street flooding was common and muddy. Photo Credit: Eloise Ullman

AFTER: The newly installed rain garden is beautiful and keeps water off the streets away from the Bay!

Key Project Facts

Type of Project: Bioretention

Cost: $8,000

Scale: 500 square feet

Funding Sources: Chesapeake Bay Trust; Severn RiverKeeper; Unity Gardens; Winchester on the Severn residential community

Partners: Severn Grove Construction (installation) Winchester on the Severn community members (cleanup days to maintain plantings), Mel Wilkins from Spa Creek Conservancy (site design).

Contact: Eloise Ullman 410-757-1966

What is Polluted Runoff?

The growth of our cities has resulted in too many paved surfaces, which prevent rain water from being absorbed by the ground. Instead, the water runs off streets and buildings, collecting trash and dangerous chemicals on its way. This contaminated water overflows into our streams and rivers, creating public health hazards and toxic waters.

Storm water projects create safe paths for polluted runoff to be captured and filtered before it reaches our waterways. They keep communities healthy and the environment clean.

When communities and their local governments work together to solve big problems like stormwater runoff, that's a story worth telling!

ChooseCleanWater COALITION

Polluted Runoff: Solutions

Howard County, Maryland

PARKS & PEOPLE FOUNDATION

PATH People Acting Together in Howard

Alliance for the Chesapeake Bay

READY Program

Problem:

There are few opportunities for youth to earn money and acquire job skills in today's competitive job market. Local jurisdictions are also interested in economical ways to meet water quality goals.

Solution:

Restoring the Environment and Developing Youth (READY) is a program working to create green jobs for young adults (16 to 24 years old) while improving watershed health through the reduction of stormwater runoff. Using municipal county grants designated for stormwater management projects, READY provides high school and college students with paid summer jobs, while simultaneously helping the county meet its water quality goals.

READY provides a formal training program for its employees, and many youth have continued to work after high school graduation, earning up to $16/hour as crew leaders. READY also employs eight full-time, year-round staff.

The Parks & People Program partnered with READY to review the effectiveness of its installations, monitor pollution reductions, and replicate successful Green jobs programs throughout the region.

Photo Credit: Green For All, READY

A READY team at work.

Key Project Facts

Cost per Average Rain Garden: $13.26/SQ FT including labor and materials

Average Time Required to Install: 4.75 work days for crew of 6 plus a team leader

The Funding Sources: County stormwater fees, grants from the Chesapeake Bay Program and other Bay area funders as administered by the Alliance for the Chesapeake Bay.

The Partners: People Acting Together for Howard County (PATH), The Alliance for the Chesapeake Bay, Howard County, Parks & People, University of MD Sea Grant Extension.

Contact: Lori Lilly, Alliance for the Chesapeake Bay 503-791-8405 Email: llilly@allianceforthebay.org

Video: http://www.greenforall.org/iage_restoring_the_environment_and_developing_youth

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ChooseCleanWater COALITION

Polluted Runoff: Solutions

Montgomery County, MD

Department of Environmental Protection — Montgomery County Maryland

Breewood Stream Restoration

mostcenter.org/casestories

Problem:

Breewood Stream receives most of its flow from four storm drains that convey stormwater runoff from surrounding neighborhoods. Flowing unmitigated into the creek, storm-water was eroding the streambanks and carrying pollutants such as pesticides and fertilizers. In addition, Breewood Stream suffered from exposed sewer lines and fish passage blockages along its length.

Solution:

Montgomery County stormwater fee proceeds enabled this stream to be restored. The project included stream channel reconstruction and vegetative plantings (trees, shrubs, and meadow grasses). This work was designed to be integrated with the construction of bioretention projects at individual residences nearby and with the county's GreenStreets initiative.

Evidence of erosion prior to restoration

The Stream repaired and restored

Photo credit: Montgomery County Department of Environmental Protection

Key Project Facts

Type of Project: Stream Restoration

Scale: 4470 linear foot stream

Overall Cost: $800,000

Funding Sources: Montgomery County Stormwater Fees

Monitoring: Ongoing monitoring for several years to provide statistics for other similar projects.

Contact: Ryan Zerbe E-mail: ryan.zerbe@montgomerycountymd.gov

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Wielding the toolkits

Questions?

Ben Alexandro
balexandro@mdlcv.org
845-596-9634

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